Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Wireless Telecommunications Bureau Seeks	)	WT Docket No. 18-203
Comment on the State of Mobile Wireless	)	
Competition	)	

COMMENTS OF THE WIRELESS INFRASTRUCTURE ASSOCIATION

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COMMENTS OF THE WIRELESS INFRASTRUCTURE ASSOCIATION

The Wireless Infrastructure Association ("WIA")[1] respectfully submits these comments in response to the Public Notice seeking comment on the state of competition in the mobile wireless market and regulatory barriers that may be inhibiting competition.

INTRODUCTION AND SUMMARY

The mobile wireless market is intensely competitive, and demand for wireless services – and the infrastructure necessary to provide those services – is growing exponentially. The United States stands on the cusp of next generation 5G wireless networks that will deliver low-latency and extremely high speeds, enabling richer mobile healthcare, improved online education, enhanced public safety, even smarter cities, and an app economy that is the envy of the world. To deliver these benefits, America's wireless and infrastructure providers must deploy new or improved wireless facilities. Although towers and macrocells continue to form the backbone of wireless networks, the deployment of 5G networks will also require "network

[1] WIA represents the businesses that develop, build, own and operate the Nation's wireless infrastructure. Members include wireless carriers, infrastructure providers, and professional services firms that collectively own and operate telecommunications facilities around the globe. Through public affairs and advocacy efforts – on the local, state and federal level – WIA works to support the widespread deployment of wireless infrastructure in order to enable wireless broadband everywhere.

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densification, whereby spectrum is reused more frequently through the deployment of far more numerous, smaller, lower-powered base stations or nodes that are much more densely spaced."[2]

The wireless industry is stepping up to meet the challenge, investing significantly in new or modified wireless deployments to compete for customers and satisfy growing demand. For example, capital expenditures by the nationwide wireless carriers in 2017 exceeded 38 billion.[3] In addition, the three largest wireless infrastructure companies alone invested nearly $2.5 billion dollars in 2017, an increase of nearly 25% over 2016.[4] Additional infrastructure deployment is necessary, however, to keep pace with demand and continue to support competition.

WIA appreciates the significant commitment the Commission has made toward creating a regulatory environment that promotes wireless infrastructure deployment and collocation of communications facilities. Although this environment has fueled competition and infrastructure

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[2] *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Second Report and Order, FCC 18-30, ¶ 1 (rel. Mar. 30, 2017) ("*Wireless Broadband Second R&O*"); *accord* Deloitte Center for Technology, Media & Telecommunications, *2018 Telecommunications Industry Outlook*, at 4 (2018), https://www2.deloitte.com/content/dam-/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-2018-telecom-industry-outlook.pdf.

[3] Verizon, Annual Report (Form 10-K), at 91 (Exhibit 13) (Feb. 23, 2018) ("Verizon Annual Report"); Baburajan K, *AT&T reveals network Capex for 2017*, TelecomLead (Jan. 26, 2017), http://www.telecomlead.com/telecom-services/att-reveals-network-capex-for-2017-73964; Press Release, T-Mobile, *T-Mobile Reports Record Financial Results Across the Board for FY 2017, Issues Strong Guidance for 2018 and Beyond* (Feb. 8, 2018), http://investor.t-mobile.com/file/-Index?KeyFile=392104627; Press Release, Sprint, *Sprint Delivers Best Financial Results In Company History With Highest Ever Net Income And Operating Income In Fiscal Year 2017* (May 2, 2018), http://investors.sprint.com/news-and-events/press-releases/press-release-details/2018/Sprint-Delivers-Best-Financial-Results-In-Company-History-With-Highest-Ever-Net-Income-And-Operating-Income-In-Fiscal-Year-2017/default.aspx.

[4] American Tower Corp., Annual Report (Form 10-K), at 36 (Feb. 28, 2018) ("American Tower Annual Report"); Crown Castle International Corp., Annual Report (Form 10-K), at 36 (Feb. 26. 2018) ("Crown Castle Annual Report"); SBA Communications Corp., Annual Report (Form 10-K), at 45 (Mar. 1, 2018) ("SBA Annual Report").

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deployment, additional barriers to infrastructure deployment must be eliminated to ensure that the necessary wireless infrastructure can be deployed to satisfy exploding customer demand for wireless services. As Chairman Pai noted in a speech delivered at WIA's Connectivity Expo, the Commission needs to further evaluate "how state and local regulations impact wireless infrastructure deployment."[5]

The record in the Commission's infrastructure proceedings (WT Docket 17-79, WC Docket 17-84) identifies barriers to deployment that remain. For example, the Section 332 shot clocks often do not facilitate prompt action on applications by municipalities because there is no deemed granted remedy. Further, many jurisdictions subject the wireless industry to excessive fees which are unreasonable and discriminatory. Wireless infrastructure deployments also are often subject to more burdensome permitting processes than similar deployments involving non-wireless technologies. The Commission should take prompt action to address these barriers to wireless infrastructure deployment to allow for responsible and sustained deployment.

Consistent with its advocacy in the FCC's infrastructure dockets, WIA reiterates that the Commission should, at a minimum, reduce wireless infrastructure siting delays by: (i) implementing a deemed granted remedy for shot clock violations; (ii) declaring that all fees charged by localities with regard to wireless siting (*e.g.*, recurring, non-recurring, ROW access, municipal attachment, and application fees) must be nondiscriminatory ; and (iii) declaring that State and local regulations subjecting wireless deployments to longer or more onerous siting processes than non-wireless deployments violate Sections 253 and 332.

[5] Ajit Pai, Chairman, FCC, Remarks at the Wireless Infrastructure Association Connectivity Expo (May 23, 2018), https://docs.fcc.gov/public/attachments/DOC-350919A1.pdf.

I. RAPIDLY GROWING CONSUMER DEMAND DRIVES THE NEED FOR MORE INFRASTRUCTURE NECESSARY TO SUPPORT COMPETITION

Ever-increasing consumer demand for mobile wireless services, including 5G, is creating exponential growth in mobile data usage and the concurrent need for providers to augment network capacity and increase coverage. To meet these demands, wireless carriers and infrastructure companies are spending billions of dollars to deploy additional infrastructure and densify wireless networks. These investments in infrastructure form the bedrock for a competitive mobile wireless marketplace.

Consumer-driven traffic demands on mobile networks have grown every year and show no sign of abating, as society has become mobile-first. There were more than 355 million mobile connections in 2014, with the number exceeding 400 million in 2017.[6] It has been estimated that the number will approach nearly 430 million by the end of this year, and more than 626 million by 2028.[7]

Mobile wireless services are an essential component of modern life. Consumers now rely on these services for more than just traditional voice conversations. The public relies on wireless networks to deliver content formerly available only from a fixed location – a desk top computer or television – to handheld, mobile devices. In fact, one-in-five American adults only use mobile broadband connections to access the Internet; they do not have traditional home broadband service.[8]

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[6] John Fletcher, *US Mobile Projections Through 2028*, at 2, SNL Kagan Wireless Investor (Apr. 13, 2018).

[7] *Id*.

[8] Pew Research Center, Internet & Technology, *Mobile Fact Sheet*, (Feb. 5, 2018), http://www.pewinternet.org/fact-sheet/mobile.

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Increasingly, the public relies on wireless networks to deliver richer healthcare, improved online education, enhanced public safety, and "smart" cities. Faced with increasing populations, cities increasingly are using wireless technology to increase efficiency and reduce waste.[9] These technologies require the deployment of numerous devices and sensors which, in turn, require the deployment of additional wireless infrastructure to provide the coverage and capacity required by these devices.[10]

The demand for wireless connectivity is universally recognized. Globally, mobile data traffic grew 54 percent between Q1 2017 and Q1 2018.[11] North America has the highest mobile data usage – 7.2 gigabytes ("GB") – on a per smartphone basis in 2017, with such usage expected to reach 40 GB by 2023.[12] The exploding demand for connectivity can be demonstrated by anticipated 5G rollouts. Although the deployment of 5G networks is just beginning, Ericsson estimates that there will be 1 billion 5G devices worldwide by 2023.[13] The GSMA predicts 100 million 5G connections in the U.S. alone by 2023, with the number growing to 190 million by 2025.[14]

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[9] Jim Lockwood *et al.*, *Wireless Infrastructure as the Foundation of Smart Cities and Communities*, at 4, WIA White Paper (May 22, 2018), https://wia.org/wp-content/uploads-/WIA_SmartCities-web-new.pdf.

[10] *Id.* at 13.

[11] Ericsson, *Ericsson Mobility Report*, at 12 (June 2018), https://www.ericsson.com/assets/-local/mobility-report/documents/2018/ericsson-mobility-report-june-2018.pdf.

[12] *Id.* at 14.

[13] *Id.* at 6.

[14] GSMA, *The 5G Era in the US*, at 7 (2018), https://www.gsmaintelligence.com/research/-?file=4cbbdb475f24b3c5f5a93a2796a4aa28&download.

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These demands cannot be satisfied without the deployment of diverse wireless infrastructure – the "physical foundation that supports all wireless communications."[15]

Today, infrastructure is heterogeneous, consisting of macro, micro, small cells, outdoor and indoor Distributed Antenna Systems ("DAS"), along with Wi-Fi hotspots and other in-building systems, that allows for more efficient spectrum usage and an interference control environment.[16]

Increasingly, operators are deploying smaller wireless communications equipment to make their networks denser, using new and existing street furniture to augment macrocellular deployments.[17] As the following chart shows, spectrum re-use enabled by network densification has increased capacity by a factor of 1600 over the past 45 years – more than 64 times greater than either new spectrum availability or the deployment of new modulation technologies.[18]

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[15] *Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies*, Report and Order, 29 FCC Rcd 12865, 12866 (2014).

[16] Bernard Borghei *et al*., *Feeding the Beast; How Mobile Operators are Racing to Keep Up with Insatiable Demand for Mobile Broadband*, at 9, WIA White Paper (May 23, 2018), https://wia-.org/-wp-content/uploads/WIA_DataCrunch-web-new.pdf.

[17] *Id.* at 9-10*; see* Ajit Pai, Chairman, FCC, Remarks at CANTO 2018 Fireside Chat, Panama City, Panama (July 23, 2018), http://www.berrybest.com/relay14.asp?df=072318&pf=DOC-352845A1.pdf. Moreover, new allocations in midband and higher spectrum will have weak propagation which will drive the need for more infrastructure. John Fletcher, *Bring on the Midband: Small Cell and Tower Projections through 2027*, at 1, SNL Kagan Wireless Investor (Aug. 30, 2017) ("2017 Wireless Investor").

[18] MoffettNathanson Research, *Spectrum (Part 1): Meeting the Capacity Challenge*, at 6 (Mar. 22, 2017).

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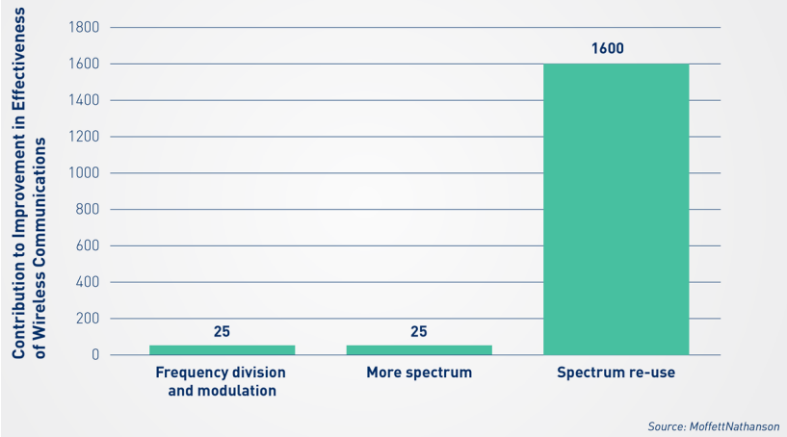

According to one estimate, nearly 125,000 small cells will be constructed by the end of this year (2018), with that number more than doubling by 2019 and rising to more than 920,000 by 2027.[19] The number of small cells could exceed traditional tower deployments by 2019.[20] As Chairman Pai has recognized, some have predicted that the deployment of 5G is going to trigger a 100-fold increase in the number of small cells deployed in the United States.[21] Similarly, Commissioner Carr has noted that "[u]pwards of 80% of all new deployments will be small cells."[22] Over twenty states have recognized the need for small cell deployment by enacting legislation to remove barriers and expedite small cell deployment.[23]

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[19] 2017 Wireless Investor at 2.

[20] *Id*.

[21] Ajit Pai, Chairman, FCC, Remarks at the World Mobile Congress, Barcelona, Spain, at 2 (Feb. 26, 2018), https://docs.fcc.gov/public/attachments/DOC-349432A1.pdf.

[22] Brendan Carr, Commissioner, FCC, Remarks at CTIA's Race to 5G Summit, Washington, D.C., at 3 (Apr. 19, 2018), https://docs.fcc.gov/public/attachments/DOC-350348A1.pdf.

[23] *See* Arizona H.B. 2365, 2017 Reg. Sess.; Colorado H.B. 1193, 2017 Reg. Sess.; Delaware H.B. 189, 149 Gen. Assembly, 2017 Reg. Sess.; Florida H.B. 687, 2017 Reg. Sess.; Hawaii H.B. 2651, 29th Leg., 2018 Reg. Sess.; Illinois S.B. 1451, 100th Gen. Assembly, 2018 Reg. Sess.; Indiana S.B. 213, 120th Gen. Assembly, 2017 Reg. Sess.; Iowa S.F. 431, 2017 Reg. Sess.; Kansas H.B. 2131, 2016 Reg. Sess.; Minnesota S.F. 1456, 2017 Reg. Sess.; Missouri H.B. 1991, 2018 Reg. Sess.; New Mexico H.B. 38, 2018 Reg. Sess.; North Carolina H.B. 310, 2017 Reg. Sess.; Ohio H.B. 478, 132nd Gen. Assembly, 2018 Reg. Sess.; Oklahoma S.B. 1388, 2018 Reg. Sess.; Rhode Island H.B. 5224, 2017 Reg. Sess.; Tennessee H.B. 2279, 2018 Reg. Sess.; Texas

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Providers are investing billions in wireless network buildout and upgrades to satisfy demand and these investments continue to support a competitive mobile wireless market. In 2017, the three largest wireless infrastructure companies – American Tower, Crown Castle, and SBA Communications – invested over $2 billion.[24] Additionally, independent small and mid-size infrastructure companies, which represent thousands of communications facilities and remain vital to promoting industry investment and diverse ownership, invested substantially in wireless infrastructure. The nationwide wireless carriers, in turn, invested more than $38 billion in their networks in 2017,[25] and some industry analysts have predicted that the nationwide wireless carriers will collectively increase their capital expenditures by 10% in 2018, the largest increase in five years.[26] This infrastructure investment continues to support mobile wireless competition[27] and – as discussed below – is the product of a competitive wireless infrastructure segment.

S.B. 1004, 2017 Reg. Sess.; Utah S.B. 0189, 2018 Reg. Sess.; Virginia S.B. 1282, 2017 Reg. Sess.; Virginia S.B. 405, 2018 Reg. Sess.

[24] American Tower Annual Report at 36; Crown Castle Annual Report at 36; SBA Annual Report at 45.

[25] Verizon Annual Report at 91 (Exhibit 13); Baburajan K, *supra* note 3; T-Mobile Press Release, *supra* note 3; Sprint Press Release, *supra* note 3.

[26] Mike Dano, *No more penny pinching: Wireless carriers' capex to surge in 2018*, Fierce Wireless (Feb. 20, 2018), https://www.fiercewireless.com/wireless/no-more-penny-pinching-wireless-carriers-capex-to-surge-2018.

[27] *See, e.g., Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless*, Twentieth Report, 32 FCC Rcd 8968, 9037 (2017) (concluding less than one year ago that "there is effective competition in the marketplace for mobile wireless services" and "no single service provider has a dominant market share at the nationwide level").

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II. THE WIRELESS INFRASTRUCTURE INDUSTRY IS COMPETITIVE

The infrastructure segment of the wireless industry is robustly competitive, across a variety of metrics. In particular, there are more than 125 entities owning and operating wireless infrastructure.[28] These entities include wireless infrastructure companies of varying size, wireless carriers, broadcasters, cable companies, utility companies, and railroads. Six of these companies each own more than 1,000 towers, and fourteen of these companies each own at least 500 towers.[29] Moreover, federal, state, local, and Tribal governments also own and manage wireless infrastructure. And as noted, wireless infrastructure is diverse, and includes towers; macro collocations on towers, buildings, water towers, and other non-purpose-built structures; and small wireless facilities, including various types of small cells, DAS, and even Wi-Fi.

Real Estate Investment Trusts ("REITs") play a critical role in providing investment capital for wireless infrastructure, with the trend toward companies claiming REIT status increasing in recent years.[30] REITs ensure that efficient amounts of capital are invested in wireless telecommunications infrastructure by allowing small investors to participate in these investments. The three largest tower companies in the U.S. – American Tower, Crown Castle, and SBA Communications – have all become REITs.[31] American Tower and SBA were the best

[28] Wireless Estimator, *Top 100 Tower Companies in the U.S.* (last updated May 30, 2018), http://wirelessestimator.com/top-100-us-tower-companies-list.

[29] *Id.*

[30] Coleman Bazelon & Pallavi Seth, *REIT Supported Wireless Infrastructure: Foundation of the Mobile Economy*, The Brattle Group (Prepared for WIA, May 23, 2017) ("REIT White Paper"), https://wia.org/wp-content/uploads/REIT-Supported-Wireless-Infrastructure-2017.pdf.

[31] *Id*. at 4.

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performing REITs in 2017,[32] and American Tower and Crown Castle have paid a combined $6.35 billion in REIT dividends to their shareholders since their inception as REITs.[33]

III. WHILE PROGRESS HAS BEEN MADE, BARRIERS TO INFRASTRUCTURE DEPLOYMENT REMAIN

WIA appreciates the FCC's continuing leadership to remove unnecessary regulatory barriers to the deployment of wireless infrastructure, including the infrastructure needed to enable the deployment of 5G networks.[34] But, as the record in the infrastructure proceedings demonstrates, additional barriers remain. The Commission should act promptly to address these remaining barriers so wireless infrastructure can be deployed rapidly to meet consumer demands for service.

Among other things, WIA is pleased the FCC has taken significant steps to modernize the Tribal Consultation Notification System so that all parties benefit from clearer review processes, timelines, and associated fees, while protecting culturally and historically significant heritage sites. WIA also applauds the FCC for streamlining environmental reviews by adding timelines for the processing of Environmental Assessments ("EAs") and eliminating the need for many floodplain EAs; taking steps to facilitate collocations on Twilight Towers; and declaring (subject to final action at the next FCC open meeting) that Section 253(a) prohibits state and local

[32] Matthew Frankel, *The 3 Best REITS of 2017*, The Motley Fool (Dec. 13, 2017), https://www.-fool.com/investing/2017/12/13/the-3-best-reits-of-2017.aspx.

[33] REIT White Paper at 5.

[34] Jonathan Adelstein, President and CEO of WIA, Statement regarding FCC Adoption of Wireless Infrastructure Streamlining Order (Mar. 22, 2018), https://wia.org/wia-statement-on-fccs-wireless-infrastructure-streamlining-report-and-order.

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moratoria – whether express or *de facto* – on telecommunications services and facilities deployment.[35]

While some states are to be commended for enacting legislation to reduce barriers to infrastructure and small facility deployments – which helps to foster competition in those communities – these legislative efforts are not happening everywhere or on a uniform basis. The record in Dockets 17-79 and 17-84 identifies a number of widespread barriers that remain to wireless infrastructure deployment.[36] For example:

- The Section 332 shot clocks often do not facilitate prompt action on applications by municipalities because there is no deemed granted remedy. As one commenter explained, litigation "is not a realistic remedy since the process can tack on additional months or even years, cost a great deal of resources, and simply may not be as efficient as waiting for the locality to act in its own process, which may exceed the shot clock, effectively nullifying the value of the shot clock."[37]

- Many localities and governmental entities subject the wireless industry to excessive one-time application fees, annual recurring fees, franchise or use fees, and/or gross revenue fees which are unreasonable and discriminatory. For example, the record shows that one-time fees can range up to many tens-of-thousands of dollars per application, while annual use fees can range up to tens-of-thousands of dollars per site. In addition, a number of jurisdictions charge fees for wireless infrastructure deployments in ROWs that do not apply to other telecommunications providers.[38]

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[35] *See, e.g., Wireless Broadband Second R&O*; *Comment Sought on Draft Program Comment for the Federal Communications Commission's Review of Collocations on Certain Towers Constructed Without Documentation of Section 106 Review*, Public Notice, 32 FCC Rcd 10715 (2017); *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, WC Docket No. 17-84 & *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, Second Report and Order*, WT Docket No. 17-79, Draft Third Report and Order and Declaratory Ruling, FCC-CIRC1808-03 (rel. Jul. 12, 2018).

[36] *See, e.g.*, Reply Comments of the Wireless Infrastructure Association, WT Docket No. 17-79 & WC Docket No. 17-84, at 2-6 (Jul. 17, 2017) ("WIA Reply Comments") (citing record examples of barriers).

[37] Comments of General Communication, Inc., WT Docket No. 17-79 & WC Docket No. 17-84, at 6-7 (Jun. 15, 2017).

[38] *See* WIA Reply Comments at 5-6 (citing examples).

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- The record also demonstrates that wireless infrastructure deployments often are subject to more burdensome permitting processes than similar deployments involving non-wireless technologies. For example, one WIA member noted that the majority of jurisdictions it deals with treat small cell and DAS deployments on poles in ROWs differently than they treat similar installations by landline, cable, or electric utilities. Another WIA member indicated that nearly half of jurisdictions where it seeks to deploy have subjected it to processes and standards that differed from those required of wireline providers and utilities in public ROWs, even though the proposed attachments are similar-sized. Some communities also apply discriminatory pre-deployment aesthetic review requirements for wireless ROW deployments that are not required for other often more conspicuous non-wireless ROW deployments.[39]

To ensure the benefits of expanded wireless and 5G services can reach all Americans, additional action is needed to address continuing barriers to deployment. As Chairman Pai has recognized: "[T]he simple truth is that governments at all levels often make the task harder than it needs to be. Permitting processes can drag on, access to rights-of-way can be delayed, review processes designed for large macrocells can be applied to small cell deployments, and exorbitant fees can be imposed."[40]

WIA has outlined in detail in the Commission's infrastructure proceedings recommended solutions to these and other barriers. WIA's pleadings in those proceedings are hereby incorporated by reference.[41] While WIA will not repeat in detail those proposed solutions, at a minimum they include: (i) implementing a deemed granted remedy for shot clock violations; (ii) declaring that all fees charged by localities with regard to wireless siting (*e.g.*, recurring, non-recurring, ROW access, municipal attachment, and application fees) must be nondiscriminatory;

[39] *See id.* at 4-5 (citing examples).

[40] Ajit Pai, Commissioner, FCC, Remarks at the CTIA Wireless Foundation Smart Cities Expo, Washington, DC, at 1 (Nov. 2, 2016), https://docs.fcc.gov/public/attachments/DOC-342032A1.pdf.

[41] Comments of the Wireless Infrastructure Association, WT Docket No. 17-79 & WC Docket No. 17-84 (Jun. 15, 2017) ("WIA Comments"); WIA Reply Comments.

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and (iii) declaring that state and local regulations subjecting wireless deployments to longer or more onerous siting processes than non-wireless deployments violate Sections 253 and 332.[42]

CONCLUSION

Consumer demand for a wide variety of services is triggering unprecedented capacity needs on commercial mobile wireless networks. These demands are driving significant investment in wireless infrastructure, which in turn supports a vibrant and competitive mobile wireless market. Although the Commission has taken a number of steps to facilitate wireless infrastructure deployment and eliminate barriers to such deployment, additional barriers remain. The Commission should act promptly to address these remaining barriers.

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[42] WIA Comments at 15-20, 26-27, 57-59; WIA Reply Comments at 7-11, 26-28.